AN ANALYSIS OF COMPANY XYZ'S INSURANCE PROGRAMS

by

Joshua C. Bernhard

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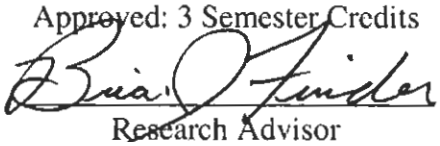

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ABSTRACT

Bernhard	Joshua		C.
(Writer) (Last Name)	(First Name)	(Middle Initial)	

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The group captive insurance program utilized by Company XYZ may not be the most economical risk transfer strategy as compared to other risk financing models. This research study's purpose was to analyze the benefits of Company XYZ's involvement in a captive insurance program versus alternative risk financing models. The goals of the study were to analyze the various insurance-based risk transfer techniques, assess the ability of Company XYZ's management structure to support alternative risk financing models administratively, and to perform an analysis of the company's commitment to control losses to be involved in other risk financing models. Within the literature review, guaranteed cost, retrospectively rated plans, large deductible plans, captive programs, and self-insurance models were all analyzed to identify benefits pertinent to Company XYZ.

Whichever risk financing plan is utilized, cash flow should be maximized, but yet more risk than can be afforded should not be assumed. The methodology used to collect the data involved establishing a table to complete based on information and prices provided by Company XYZ's current and prior insurance providers and insurance broker. From the data collected, conclusions were drawn that the group captive was not the most economical, but did offer the best services. Because an increased need for administrative staff in the loss control department was needed by nearly all plans analyzed, it is recommended that Company XYZ continue to utilize the group captive plan.

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CHAPTER I: INTRODUCTION

American insurance originated hundreds of years ago as mutual insurance companies with the primary purpose of financing personal property losses (Costle & Shauer, 2000). During the 1960's, captives (i.e. insurance companies that are owned by the policyholders) began insuring more traditional lines of coverage such as worker compensation, professional and general liability. A crisis in the 1970's created difficulty obtaining product liability insurance and created a surge of group captives that were legally allowed to combine and create cooperative insurance entities that could purchase insurance as a group. The hard (i.e. an informal term when insurance prices rise sharply and coverage shrinks) insurance market of the mid-1980's presented another crisis that made it difficult for a broader range of entities to purchase traditional lines of insurance and resulted in another surge of captive membership. After the crisis in the mid-80's, legislation began making the formation of captives easier and resulted in another surge in the captive market from approximately 1,000 in 1981 to greater than 4,000 in the year 1999. The evolution of insurance made apparent leaps and bounds as a result of troublesome times, specifically with captive insurance.

The 1990's were a great time to be investing as the market continued to grow until mid-year in 2000 (Adams, 2003). During this time of economic boom, claims were typically under-reserved (i.e. an underestimation of the total dollar amount of potential claims based on the company's historical experience) and created a significant financial exposure to the insurers as the claims developed. In addition, medical costs began to significantly inflate. The combination of a depleting stock market, under-reserved claims, and inflating medical expenses started the hardening of the insurance market. Then, the

catastrophic events of September 11, 2001 occurred, which most likely resulted in the largest losses in insurance history that had to be paid. Consequently, it is probable that the hardening of the insurance market suddenly became a major focus for many businesses because their rates were expected to increase 20-30 percent to compensate for the unexpected losses due to terrorism, increase in medical expenses, under-reserved claims, and the downturn in the stock market.

Company XYZ is a heavy-highway contractor that performs seasonal work throughout the Midwest region. They have been in business over 30 years and typically employ 400 people during the peak construction season (i.e. June – September). During the winter months fewer than 50 employees are on the company's payroll. Prior to the catastrophic events on September 11, 2001, Company XYZ joined a group captive. Because the insurance market was predicted to continue hardening and the company had marginal claim experience, it was becoming foreseeable that their insurance premiums were going to be increasing at a significant rate. The amount of money that is required to pay for Company XYZ's insurance premium can essentially be considered a drain on the organization's bottom line. Thus, the group captive insurance program utilized by Company XYZ may not be the most economical risk transfer strategy as compared to other risk financing models.

Purpose of the study

The purpose of this study is to analyze the benefits of Company XYZ's involvement in a captive insurance program versus alternative risk financing models.

Goals of the Study

The goals of the study are to:

1. Perform an analysis of various insurance-based risk transfer techniques.
2. Assess the ability of Company XYZ's management structure to support alternative risk financing models administratively.
3. Perform an analysis of the company's commitment to control losses to be involved in other risk financing models.

Background and Significance

Insurance is one of the leading expenses associated with being in business. Beginning in approximately 2000, the insurance industry predicted a 20 - 30 percent annual increase in premiums, which started gaining the interest of nearly all business owners. Company XYZ was enrolled in a high deductible insurance policy which was up for renewal at the end of calendar year 2000. Captives were introduced to Company XYZ prior to 2000 by their insurance agent as an alternative program. Their insurance agent was historically utilized to obtain the best insurance prices for the coverage needed. The forms of coverage reviewed included their current program, a high deductible, and an alternative group captive model. Because Company XYZ's loss experience was beginning to increase, insurance prices were not going to be cheap. Additionally, the soft insurance market of the 1990's was going to harden sooner or later and the bull stock market was slowing. The key components of each quote evaluated by the company were the services offered, fee schedules, and the rates. After much deliberation and comparison between the high deductible/retro and the unknowns of the captive, Company XYZ decided to enroll with the group captive.

Becoming a shareholder (i.e. member) of the group captive exposed the company to a much greater financial risk by putting them one step closer to being self-insured. In

addition to the financial risk associated with claims, the company was also going to have to pay more up-front for the fees associated with the captive. Prior to making the decision to join the captive, the higher cost associated with this model of insurance was identified, but accepted. As an insured progresses toward self-insurance, more demands are placed administratively to control the costs; specifically claims management and the continued implementation and progression of the insured's safety culture. Additionally, the captive's profitability is not only dependant on the shareholder's experience, but also the experience of the other members. Dependent on the insured's losses and the group's loss experience, after four years, shareholders are eligible to receive returns on their investment. This is where the safety culture that has evolved is important in minimizing loses which determine the amount of money that is potentially returned.

Assumptions of the Study

It is assumed that during the time that this study was completed, that there was no significant change in the insurance market.

Limitations of the Study

1. The Company is limited to the number of alternative risk transfer models available. Self-insurance is the only other option after risk financing through a captive unless the Company were to decrease the amount of risk assumed and pay higher premiums.

2. The study is limited to the insurance policy years of 2000 – 2004 for Company XYZ.

3. This study is limited only to a risk financing assessment for Company XYZ.

Definition of Terms

Captives – "all types of captives are insurance companies that are owned by their policyholders; usually created to insure their own exposures to loss" (Wright, 2002, p. 39)

Domicile – the place where a captive is licensed and formed (Wright, 2002, p. 39)

Experience – "(1) the loss record of an insured or of a class of coverage. (2) Classified statistics of events connected with insurance, of outgo, or of income, actual or estimated. (3) What figures show to have happened in the past" ("Glossary of Reinsurance Terms", n. d., n. p.)

Fronting Insurance – "insurance policies are issued on behalf of captives through licensed insurance companies to meet state filing requirements and financial responsibility requirements. The fronting insurer is ultimately responsible for paying the claims through its policies and relies on reimbursement of funds from the captive and its reinsurance" (Wright, 2002, p. 39).

Group Captives – "Two or more policyholders that are unrelated to each other can own group captives. Also, heterogeneous or homogeneous policyholders can own group captives. Captive participants do not have to be in similar operations to join together in a captive" (Wright, 2002, p. 39).

Hard – "an informal term when insurance prices rise sharply and coverages shrink". (Adams, 2003, p. 1).

Heterogeneos –captive members are in different businesses, (i.e. construction contractor and restaurant owner)

Homogeneous – captive members are of the same business or orientation (i.e. construction contractors only)

Incurred Loss Ratio – "the percentage of losses incurred to premiums earned" ("Glossary of Reinsurance Terms", n. d., n. p.).

Letter of Credit – "a financial guaranty issued by a bank that permits the party to which it is issued to draw funds from the bank in the event of a valid unpaid claim against the other party; in reinsurance, typically used to permit reserve credit to be taken with respect to non-admitted reinsurance; and alternative to funds withheld and modified coinsurance" ("Glossary of Reinsurance Terms", n. d., n. p.).

Loss Ratio – "proportionate relationship of incurred losses to earned premiums expressed as a percentage" ("Glossary of Reinsurance Terms", n. d., n. p.).

Occurrence – "an adverse contingent accident or event neither expected nor intended from the point of view of the insured. With regard to limits on occurrences, property catastrophe reinsurance agreements frequently define adverse events having a common cause and sometimes within a specified time frame, for example 72 hours, as being one occurrence. This definition prevents multiple retentions and reinsurance limits from being exposed in a single catastrophe loss" ("Glossary of Reinsurance Terms", n. d., n. p.).

Onshore Domicile – states within the 50 United States that enabled captive legislation to operate within their borders (Wright, 2002, p. 39)

Reinsurance – this provides insurance for losses in excess of those the insured can sustain, both for specific losses and aggregate losses (Wright, 2002, p. 39)

Retrospective Rating – "a plan or method which permits adjustment of the final reinsurance ceding commission or premium on the basis of the actual loss experience under the subject reinsurance treaty – subject to minimum and maximum limits" ("Glossary of Reinsurance Terms", n. d., n. p.)

Risks – "... chance of loss or uncertainty of loss" ("Glossary of Reinsurance Terms", n. d., n. p.)

Self Insurance – "setting aside of funds by an individual or organization to meet his or its losses, and to absorb fluctuations in the amount of loss, the losses being charged against the funds so set aside or accumulated" ("Glossary of Reinsurance Terms", n. d., n. p.).

Single Parent Captive – a captive owned by one company and insures that company and its subsidiaries' exposure (Wright, 2002, p. 39).

CHAPTER II: LITERATURE REVIEW

The purpose of the study was to analyze the benefits of Company XYZ's involvement in a captive insurance program versus alternative risk financing models. In this chapter, pertinent literature will be reviewed specifically to analyze the benefits of Company XYZ's involvement in a captive insurance program versus alternative risk financing models. Based on the review, there appears to be at least five forms of risk financing that an organization can acquire to minimize the financial impact of unplanned losses, excessive insurance costs, or a combination thereof. Figure 1 below displays various models of insurance which will be further discussed in this chapter and the correlation between risk retention and opportunity for savings.

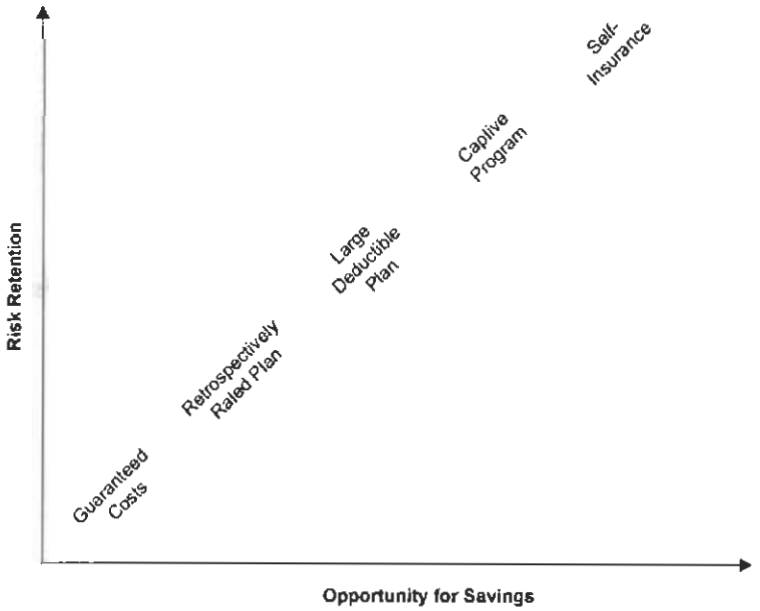

Figure 1. Alternative funding mechanism risk-reward trade-offs (Heffron III, J. L., Maloney, J.M., & Palmer, W.J.,1996).

The type of risk financing plan utilized by a contractor should be selected to

maximize cash flow, but yet refrain from subjecting them to more risk than they can safely afford (Davis, 1998). Additional considerations to take when selecting the right risk financing plan would include the size as well as financial strength of the contractor, the attitude of management toward risk, the viability of the risk management program, and the contractor's tax position. Depending upon a contractor's appetite of risk (i.e. perceived acceptance of risk), various types of financing plans are available from the insurance industry, with some being vastly independent of the insurance industry. The literature review conducted will address the following risk financing plans in sub-parts:

1. Guaranteed Cost
2. Retrospectively Rated Plan
3. Large Deductible Plan
4. Captive Program
5. Self Insurance

Guaranteed Cost

Guaranteed cost insurance plans are considered "traditional" in terms of commercial insurance plans (i.e. guaranteed cost, retrospectively rated plans and large deductibles). Davis identifies guaranteed cost insurance as a probable rating plan that is based solely on a contractor's payroll (1998). This type of risk financing plan is typically for contractors with a premium of less than $100,000. A guaranteed cost plan is beneficial to smaller contractors because they know exactly how much the insurance is going to cost and allows them to make sure a large loss does not drain profits (Heffron III et al, 1996). When a contractor does have more losses than anticipated, they will instead make up for the added expense incurred by the insurance company in the following

policy years as a result of an increased experience modification rating (EMR). A contractor who is effective in controlling losses will have a credit modifier (i.e. less than 1.0) and one who is not effective (i.e. EMR is greater than 1.0) will have to pay more for the standard premium. Unfortunately for the contractor, the EMR is based on losses experienced four years prior to the policy issuing date, excluding the most recent full calendar year.

Retrospectively Rated Plan

A risk financing plan that assumes more risk than a guaranteed cost plan and as a result may offer a greater opportunity for savings, is a retrospectively rated plan (often referred to as a retro). This type of plan is essentially cost plus, meaning that the contractor pays for the basic premium (i.e. fixed costs) and any additional costs due to losses. There are many types of retros, but Davis reports incurred loss and paid loss retrospectively rated plans are the most common (1998).

Incurred loss retrospectively rated plan.

An incurred loss retrospectively rated plan (also known as an incurred loss retro) is a loss sensitive plan, where if losses are controlled, a contractor can govern the total insurance costs. This plan uses the basic premium (i.e. fixed costs of the insurance program) and incurred losses (i.e. the total of both paid and reserved claims), to determine how much the premium (i.e. total cost) will be. A sample premium formula provided by Davis (1998), for an incurred loss retro is: Premium = Basic Premium + ELPF + (Losses x LCF) x Tax Multiplier. In this equation, the ELPF is the excess loss premium factor that limits the amount of losses included in the calculation, the Losses are the actual incurred losses during the policy year, and the LCF is the loss conversion

factor for claim adjusting and settling. The Tax Multiplier determines the amount of tax owed, based on the total premium developed. The initial retro premium charged is usually based on the expected retro premium. Often insurers permit contractors to pay the premium during the course of the year. As the policy and losses mature (i.e. grow in dollar value), the initial retro premium is adjusted retrospectively. The adjustments typically occur 6 months after the policy ends and every 12 months after that until all the losses are paid or the insurer and insured agree to close the plan. This plan also offers a minimum and maximum limitation. The minimum limitation restricts the amount of savings a contractor can receive as a result of controlling losses and the maximum restrains the amount a contractor can be assessed if losses are out of control. The minimum limitation is designed to provide the insurer accepting the risk some profitability and the maximum protects the contractor's bottom dollar. Contractors enrolled in an incurred loss retro typically pay premiums exceeding $250,000. This plan may provide significant premium savings if an effective loss prevention and loss control program is implemented.

Paid loss retrospectively rated plan.

Paid loss retrospectively rated plans (or paid loss retros) appear to be very similar to incurred loss retros with the exception that a paid loss retro premium is based on paid losses versus incurred losses. This plan also has some characteristics of self-insurance from the sense that when claims are paid by the insurer, the contractor has to pay the insurer the amount paid to the claimant (Heffron III et al, 1996). A paid loss retro however does not demand the administrative staff needed by a self-insurance plan for

claim handling and filing. This service is administered by the insurer, but often with minimal interest because the insured is paying for the losses.

A contractor considering a paid loss retrospectively rated risk financing plan can expect the initial premium payment to be substantially reduced (Heffron III et al, 1996). The initial paid loss retro premium is typically congruent only to the insured's basic expense, loss limitation premium, premium tax, and assessments. The basic expenses tend to be higher, however, because the insurer has to compensate for lost investment income on unpaid losses that it would normally acquire in a guaranteed cost plan or incurred loss plan. Additionally, the insurer usually requires financial security in the form of a letter of credit or surety bond. The financial security is needed to compensate for the difference between the initial premium and the estimated premium (i.e. the insurers guess as to the number and amount of claims plus the initial premium). Many times the insurer requires the financial security provided by the contractor to be guaranteed with an indemnification agreement or promissory note.

Contractors enrolled in paid loss retros typically pay premiums in excess of $500,000 according to Davis (1998). They also should have an established loss prevention and loss control program in place. If losses are controlled, this type of risk financing plan should be financially rewarding to the contractor due to increased cash flow.

Large Deductible Plan

A large deductible plan permits the insured to retain liability up to a certain dollar amount per claim. Depending on the insurance agreement, some deductibles can be $250,000 and up (Davis, 1998). Once the deductible is reached, the reinsurance

purchased with the plan, compensates the claimant for the remainder of its existence. Contractors often choose this plan in exchange for lower premiums, hence an increase in cash flow. A typical premium is $250,000 and up for a large deductible policy (Davis, 1998). With a reduced premium, many of the state taxes and assessments are minimized. Additionally, this type of risk financing plan offers many of the same benefits of self-insurance, except for the need to hire additional staffing to manage and file claims. Typically, the insurer provides all the necessary administrative staff to perform those activities for the insured.

Captive Program

The transition from commercial insurance to captive insurance is simply identified as the evolving of a company's further sophistication towards becoming self-insured. Essentially, a captive is a self-insurance company that has been formalized into a corporate structure that receives premiums to pay for losses. The captive's primary purpose is financing the losses and risks associated with the areas underwritten (Mead, January 2002). Of the hierarchy of insurance-based models (as displayed in Figure 1), self-insurance is the only risk financing model that offers a higher opportunity for savings and consequential increased risk retention than a captive. Captives can provide basic benefits to the owner or members by including lines of coverage not otherwise available, as well as providing a financing plan to pay for losses incurred by the captive or members (Costle & Schauer, 2000). For instance, Hallmark Cards Inc., found their captive served as a counterbalance when the insurance market turn hard, it established a greater focus on the adherence to a loss control program, but also required financial discipline as a result of the structure (Zolkos, 1997). Various hybrids of alternative risk financing via captives

are constantly being created and offer a viable and financially feasible alternative to other insurance options (Costle & Schauer, 2000). Following is a discussion of the three basic captive structures that are commonly utilized; parent, rented, and group.

Single parent.

Of the three captive structures, the single parent is the most common today (Mead, April 2002). Having been in existence for over 50 years, a single parent captive is owned by one company, and usually provides insurance for the parent only. Tax issues were historically resolved with the utilization of a single parent captive. Today the purpose has evolved from tax advantages to providing alternative risk financing for a company on a specific line of coverage that is unavailable or financially unfeasible. Hallmark Cards Incorporated's creation of their captive provided needed coverage capacity, direct access to reinsurers, and helped to provide complete coverage (Zolkos, 1997). The progression from tax advantages to alternative risk financing is a result of the more challenging tax laws that now may not even present a tax advantage. Common parent captive coverage includes worker compensation, property, directors and officers liability, terrorism and mold. Recently, employee benefit programs have been written for single parent captives also. Merging from a tax advantage to an encapsulated risk funding tool has been a structural advantage for captives as a whole.

As indicated in Figure 2, single parent captives are structured historically to fund only the risks of the parent, however the basic structure of a single parent captive is similar to a corporation's, including owners, directors, and officers (Mead, April 2002). Therefore, the single parent captive may also fund umbrella liability for owner, director, and officer coverage. C-type corporations (i.e. income passes through at the corporate

level) are the typical captive structures permitted by domiciles, however some also allow S-type corporations where income passes through the shareholders and are only taxed at the shareholder level. Limited liability corporations are only allowed by a few domiciles.

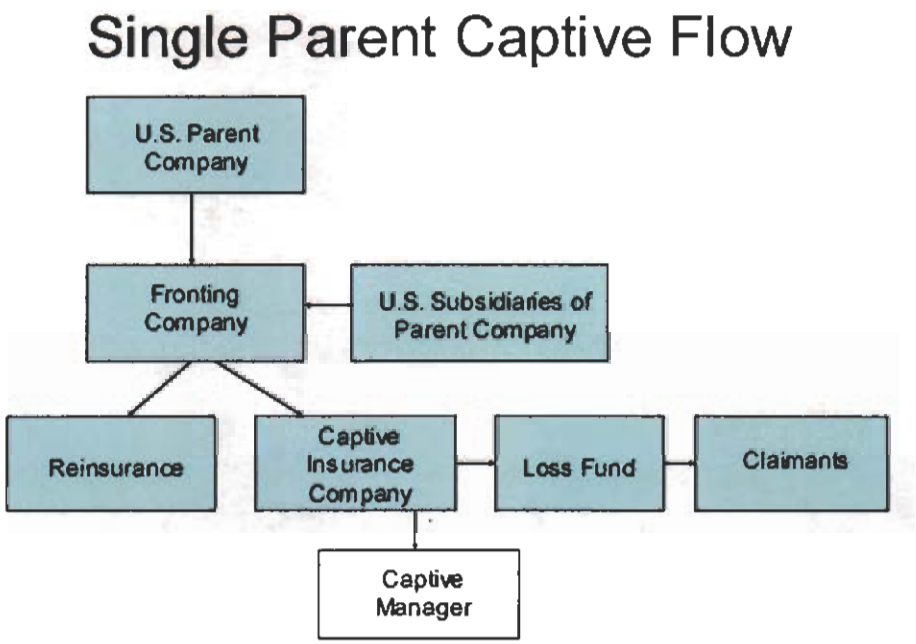

Figure 2 (Myers, 1999)

Rental captive.

A rental captive is another insurance-based model that is utilized by companies. Rental captives are commonly referred to as "rent-a-captives" or "sponsored captives". Historically, rental captives gained popularity in the late 1970's because the cost of forming and operating a parent or group captive, was high (Mead, April 2002). As indicated in Figure 3, rented captives are similar to single parent captives except that the insureds do not have a capital or resource commitment (Whitehead, 2003). Because significant capital outlay and resources are not required to partake in a rental captive, opportunities for significant financial returns are also decreased. As a result, the operators

of the captive reap the financial benefits (Costle & Schauer, 2000). The renter instead, pays to have the rental captive capitalized, managed, and underwritten by a larger operation, often a traditional insurer, which increases the expense of the alternative risk financing. A separate set of accounting records are maintained to reflect the risks for each renter (i.e. insured) (Mead, April 2002). Having a separate set of accounting records essentially creates a firewall (i.e. financial loss barrier) between renters but at some point the firewall will not exist. The rental captive must be structured to create the potential for some sharing of risks between renters. If it is not, the IRS likely will challenge the deductibility of premiums to rental captives because of a lack of real risk transfer. As a result, the tax benefits regarding rental captives at this time are questionable.

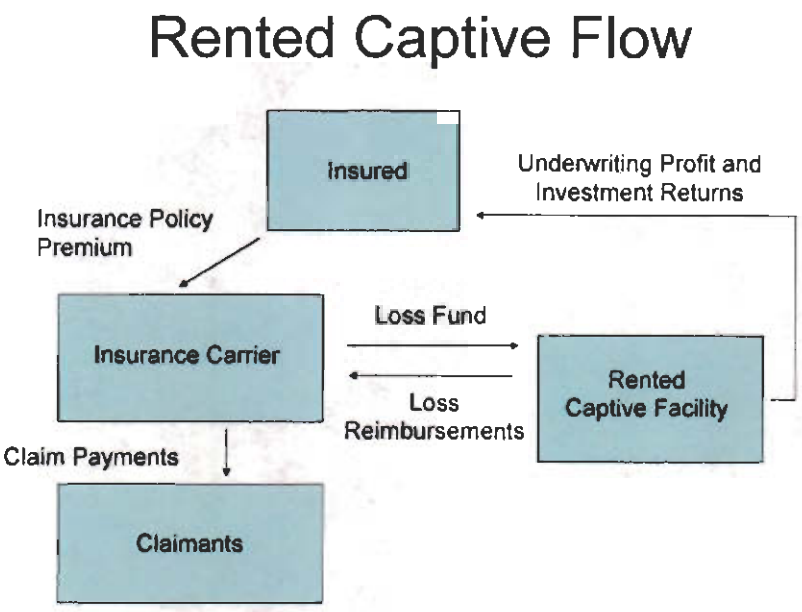

Figure 3 (Wigmore, 2003)

Group captives.

A group captive is the creation of a formal association or informal relationship by multiple businesses to obtain otherwise unavailable coverages or limits with the end result being potential revenue (Mead, April 2002). The insureds are unrelated, except for being members of the group captive. Group captives are either heterogeneous (i.e. a group organizations with different exposures) or homogeneous (i.e. a group of organizations with like exposures). A homogeneous group usually results in strengthening of the trade group due to sharing of best practices and learning from each other's mistakes (Mead, April 2002).

The corporate structure of a group captive has one or more share classes that permit a dividend policy, reflecting the claim profile of each separate member (Mead, April 2002). From a shareholder perspective a group captive flow model recommended by Innovative Captive Strategies is identified in Figure 4. Some of the components of the flow model will be addressed later in the chapter.

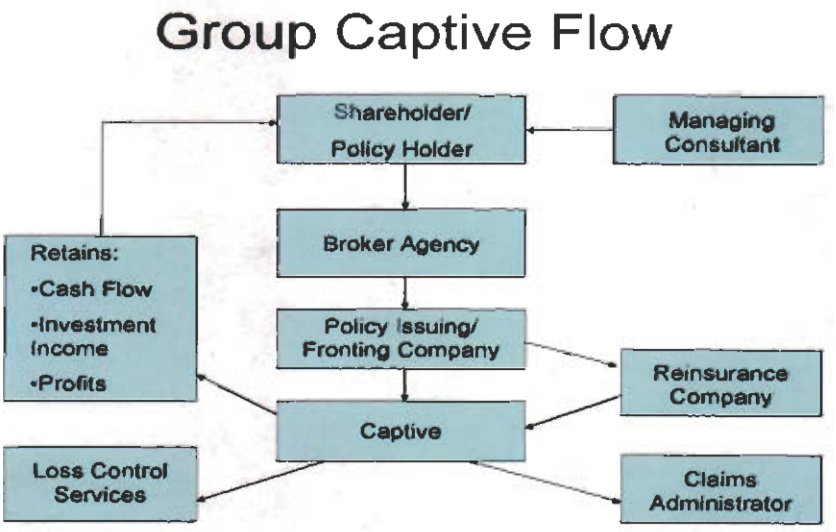

Figure 4 (Innovative Captive Strategies, n. d.)

At times shareholders may have difficulty preventing and controlling their losses. This is a challenge that begins as a non-group issue, but evolves into a group issue because group members are exposed to shifting and sharing (Mead, April 2002). Shifting and sharing occurs in the "captive retention" layer displayed in Figure 5. This challenge could also be viewed as added value from the perspective that peer pressure may strongly influence a shareholder to implement a proactive loss control program, decrease the exposure to other shareholders and, ultimately increase the opportunity for returned dividends from unspent loss funds (i.e. a component of a shareholder's premium specifically for paying losses).

Captive Operation

Domiciles.

As stated previously, captives require their owners to be more sophisticated in the management of their risks. Part of that sophistication includes selecting a domicile, partners, underwriting procedures and terms of reinsurance. Domiciles are the place a captive is licensed and formed (Wright, 2002). A domicile can be onshore (i.e. within the United States) or offshore (i.e. outside of the United States). Onshore domiciles are governed by the United States and have more regulatory issues that may result in increased expenses or delays (Mead, January 2002). Some United States domiciles include Vermont, Colorado, Hawaii, Maine, New York, Rhode Island, and South Carolina (Costle & Schauer, 2000). Offshore Caribbean domiciles include Bermuda, the Cayman Islands, Barbados, the British Virgin Islands, the Bahamas, and the Truks and Caicos (Costle & Schauer, 2000). European domiciles include Guernsey, Ireland, the Isle of Man, Jersey, Luxembourg, and others. Offshore regulators feel that as long as a

captive is well informed, financed, and managed, greater freedom is allowed to use the captive as desired because the captive is not covering the risks of the offshore location (Mead, January 2002). All captive domiciles require annual financial statements to be filed and most require audits and actuarial reviews of the financial statements (Costle & Schauer, 2000). The required amount of capital and surplus, investment limitations, and regulatory restrictions should be taken into consideration when selecting a domicile (McAndrew, 2003). Single parent captives require capitalization of $100,000 to $500,000, while group captives can require up to $750,000 of capitalization. It should also be noted that onshore domiciling typically requires greater capitalization than offshore. Single parent captives will find investment limitations to be less than those of group captives. Offshore domiciles are also usually less restrictive on investments. Domicile regulatory restrictions may dictate which lines of coverage are permitted. Above and beyond simply onshore or offshore, capital requirements, investment limitations, and regulatory requirements could financially impact a captive if they are overlooked when selecting a domicile. Additionally, if an offshore domicile is selected, the captive must elect whether or not to assume the 953(d) election of the Internal Revenue Code (Mead, April 2002). If the captive does take the 953(d), it will be taxed as a United States entity. When the 953(d) is not taken, highly qualified tax experts are needed to consult (given the ever-changing tax laws) to prevent formidable fines and penalties if completed incorrectly, which may result in added administrative fees.

Captive partners and their responsibilities.

From an administrative perspective, various tasks should not be overlooked and internal policies should require experienced personnel to accept given responsibilities.

Some of these tasks include premium collection, billing, policy issuance, reinsurance placement, underwriting, statutory filings, and claim adjustment (Whitehead, 2003). The administrative staff can be built within the captive or third party administrators can be hired. Some of the partners needed include a United States consultant or advisor, a domicile manager, the risk sharing entity, an attorney, an accountant, a banker and an actuary. The United States consultant, herein after referred to as the advisor, domicile manager and risk sharing entity will be addressed in detail.

When choosing the captive's advisor, the resource should be experienced in legal, investment, actuarial, and accounting (Whitehead, 2003). This step is critical for a successful captive. The advisor should be utilized to assist with the decisions while structuring the captive. This includes the selection of directors and officers, developing business plans and financial projections, and selecting the domicile. The business plan is needed for regulatory approval and risk sharing support (Mead, January 2002).To prepare an approved plan, the advisor must be knowledgeable about captives, the captive owner/member goals and expectations. Additionally, they should be experienced in legal, investment, actuarial, and accounting.

The domicile manager and/or the attorney form the "company" structure of the captive, including officers and directors (Mead, January 2002). Domiciles often require extensive references for a domicile manager or attorney to be accepted. They should also specialize in the legal aspects of captive formation and captive taxation (McAndrew, 2003).

A risk-sharing entity (i.e. reinsurer) is responsible for the largest and most frequent claims (Mead, January 2002). This is generally a United States licensed and

admitted insurance company. Sometimes it is the traditional insurer previously utilized, because of the relationship already established. For stability and long term credit worthiness, a carrier should be obtained with an AAA rating by Standard & Poor's (Whitehead, 2003). According to the Standard & Poor's rating system, an "AAA" rating identifies an insurer as having extremely strong financial security characteristics. Receiving an "AAA" rating is the highest possible assigned by Standard & Poor's. Standard and Poor's regards insurers with a "BBB" or higher rating, as having financially secure characteristics that outweigh any weaknesses, and are highly likely to be able to meet financial commitments. In addition to having a high rating, the insurer also needs to know the captive's business and be committed for the long haul. Many times the risk-sharing entity will offer services including underwriting, risk engineering, loss adjusting, claims reserving, litigation, and regulatory support (Mead, January 2002). Additionally, the risk-sharing partner produces a credible certificate of insurance which is typically needed to perform work, from a contractual view, because the party requesting the certificate of insurance may not view a captive produced certificate of insurance as valid.

The captive actuary is hired to perform actuarial loss evaluations of the captive (McAndrew, 2003). Well-known national and international firms as well as small independent firms can be utilized to obtain an opinion. The result of the loss evaluation is the establishment of a loss fund, which accounts for approximately 60 percent of the insured's premium. Loss funds will be discussed in greater detail later in the chapter.

Underwriting offers captives two options (Whitehead, 2003). The first option is to have the insurance coverage written directly. This would require a qualified underwriter to be hired by the captive and would increase administrative costs. Additionally, writing

the coverage directly to the captive would require it to be licensed within every state in which coverage is written (this option is not common). The other option is to have a licensed insurance carrier front (i.e. write) the policy at which point the licensed insurance carrier becomes the fronting company. With this option, the captive serves as a reinsurer to the fronting company. Serving as a reinsurer means the captive pays for claims through the fronting company. As a result, no additional administration or expenses are incurred securing state licenses. A licensed insurance carrier also brings risk management expertise and experience to a captive that could be invaluable. Additionally, they will provide certificates of insurance, which are often required of contractors to perform work.

Reinsurance, to a captive, has two different meanings. One being something purchased to provide a second tier insurance for losses exceeding what the captive can retain for specific losses and aggregate losses (i.e. total losses paid during a policy year) (Wright, 2002). This is purchased from the "risk-sharing" entity previously described (see Figure 5 for an example of a reinsurance structure utilized by Innovative Captive Strategies). Note that an umbrella policy can also be purchased above and beyond the reinsurance. The other meaning for reinsurance is visible within the structure of a group captive. A group captive essentially serves as reinsurance to the risk sharing partner via shifting and sharing to accept a predetermined level of risk and the resulting premiums (Mead, January 2002). This is visible in the "Captive Self-Insured Retention" block of Figure 5.

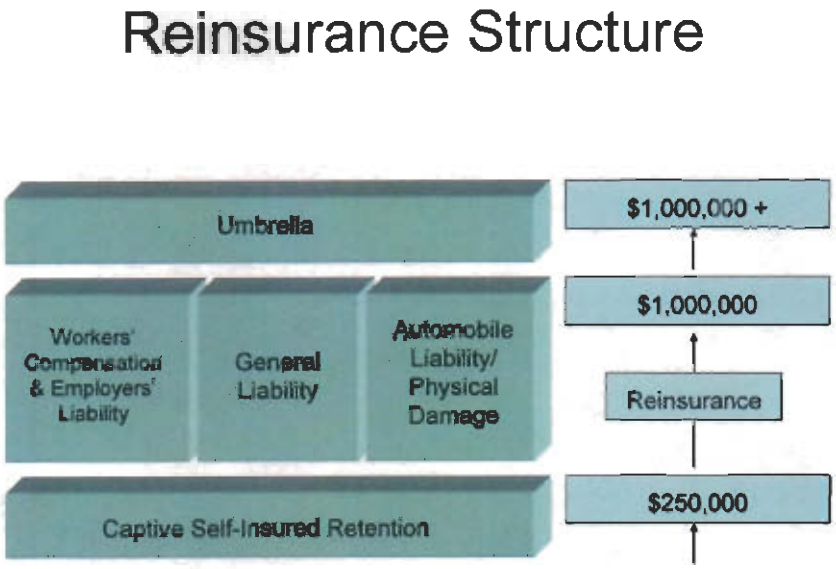

Figure 5 (CSDZ & Innovative Captive Strategies, 2001)

Committees.

A common structure for group captives appears like Figure 6 where a risk control committee, finance committee and an underwriting committee all report to the board of directors who makes the final decision via majority vote. The risk control committee is designed to review claim trends, address underwriting violations, and reserve practices (Mead, January 2002). This committee might be involved in the selection of adjusters and attorneys. The utilization of these committees may result in premium savings because control of claims adjusters and attorneys by the captive shareholders is established. In a traditional risk financing plan, claim adjusters and attorneys sometimes make decisions favoring the insurer versus the policyholder, or in this case, shareholder.

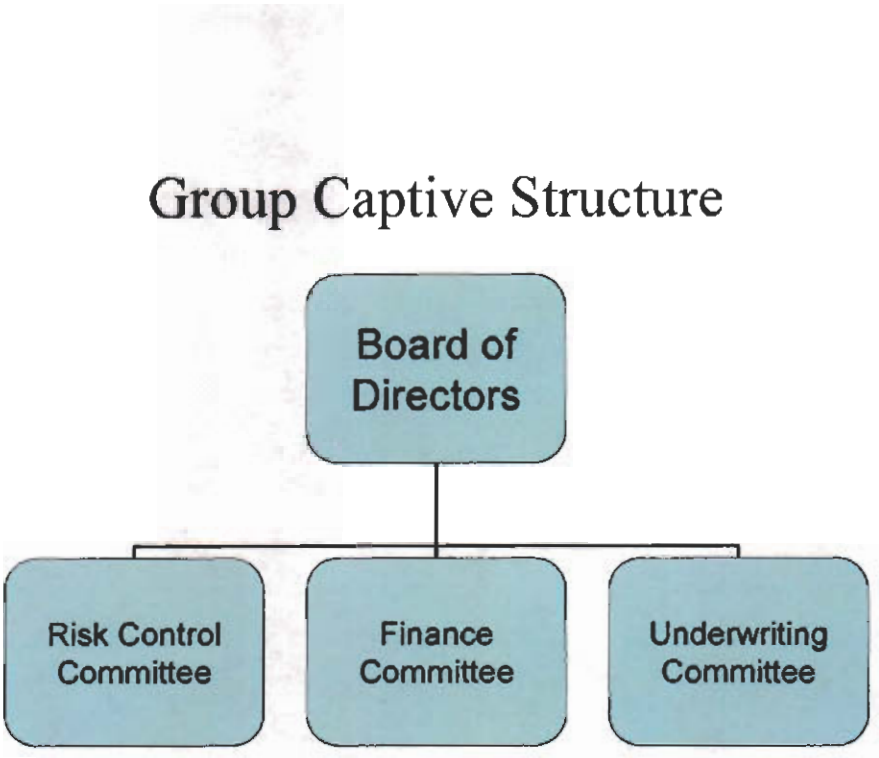

Figure 6 (CSDZ & Innovative Captive Strategies, 2001)

The finance committee is established to make suggestions to the board of directors, usually based on the domicile manager's recommendation, the allocation of funds to fund losses (Mead, January 2002). These funds have the potential to be major sources or revenue, if losses are controlled and the funds are managed correctly. After the decision is made where to allocate the funds, the domicile manager performs the investing.

Underwriting committees are only needed if a captive is going to assume risks other than the captive owners (Mead, January 2002). Underwriting standards, lines of authority, and procedures need to be established for the committee to function efficiently. This committee may also coordinate reinsurance. A captive can save money by underwriting directly, unlike traditional insurance. Writing directly reduces fronting fees paid for reinsurance, but does tend to increases administrative requirements.

Services.

The services offered by a captive are sometimes the selling point of this alternative risk financing method. Some services a captive might offer include claims management, loss control, consultation, management, and benchmarking. Claims management allows the captive to have greater claims control (Costle & Schauer, 2000). This service can either be performed in-house or through a third party administrator. The claims manager is typically orientated just for the captive and has multiple years of experience. Claim management is usually three percent of the total premium (Captive Resources, Inc., 1995). Loss control services account for one percent of the total premium. The added incentive to minimize losses demands more attention to loss control and as a result is sometimes added into the fixed costs. The loss control services include safety training, loss control program audits, job site audits, program implementation, and coordination of best practice sharing through risk control workshops. Risk management services are usually included in the Managing Consultant fees. This includes establishing benchmarking, providing detailed loss runs and reports, coordinating risk control workshops, and providing suggestions for improved loss control practices (Innovative Captive Strategies, n. d.). While all the services offered with a captive can be considered valuable, in all likelihood, they do add to the cost of the captive.

Cost of a Captive Program

The high capital outlay, start-up, and maintenance costs of captives can create a financial-based challenge (Costle & Schauer, 2000). In addition, the volatile insurance market also creates a challenge when costs make significant leaps and coverage decreases. Even so, captives appear to be a risk financing tool that can be utilized to

stabilize insurance costs. When the insurance market is hard, insureds capture the perceived underwriting profit and when it is soft, insureds capture the investment income from their unused loss fund because of the high interest rates (Wigmore, 2003). The costs of a captive appears in an unbundled package (i.e. no hidden costs) with the total being reported as the insured's premium. Premiums are calculated with the following formula: PREMIUM = FIXED COSTS + LOSS FUND. The fixed costs of a captive are identified in Table 1. In comparison to traditional insurance, fronting fees are usually reduced because of direct writing (Costle & Schauer, 2000). Reinsurance costs are also usually reduced because of the direct access to the wholesale reinsurance market.

The loss fund of the premium is determined by an actuary, as previously stated. Actuaries base their loss fund determination on the shareholder/owner's exposure and experience. This is the component of the captive that shareholder/owner's have the most control over. If losses are controlled, portions of the loss fund can be returned. A frequency fund (usually 25% of the loss fund) and a severity fund (usually 75% of the loss fund) are set up within the loss fund. The frequency fund is intended to pay for the first $75,000 of a claim. Anything exceeding $75,000, but up to $250,000 is paid via the severity fund. If the claim exceeds $250,000 the excess is obtained from any remaining frequency fund dollars. The policyholder can be assessed up to 100 percent the original frequency fund or, if it is a group captive, shifting a sharing of exceeding losses on a pro-rata basis (i.e. each shareholder pays the percent that correlates with the amount of premium paid in comparison to the entire captive premium). If all the shareholders funds are exhausted after shifting and sharing and a balance due still remains, the reinsurance

policy pays the remaining balance. The likelihood of a reinsurance policy being utilized appears to be very minimal.

Table 1

Captive fixed costs (Captive Resources, 1995)

Unbundled Fixed Cost Item	Minimum % of Premium	Maximum % of Premium
Front Fee	6%	12%
State Tax	3.5%	4.6%
FET (i.e. Federal Excise Tax)	0%	1%
Specific Reinsurance Cost	7%	14%
Broker Costs	4%	8%
Managing Consultant Fees	4%	5%
Claims Administration	3%	3%
Loss Control Administration	1%	1%
Offshore Management/Audits/Actuarial/Miscellaneous	1%	1%
Total Fixed Costs	29.5%	49.6%

Self-Insurance

A self-insurance plan assumes all liabilities, up to a specific limit, but also offers the greatest opportunity for savings if losses are controlled. If losses are not controlled and the retention limit is reached, excess insurance, also named reinsurance, covers the dollars exceeding, on a per claim basis. The State of Minnesota's Workers'

Compensation Reinsurance Association (WCRA) offers retention limits of $380,000 (low), $760,000 (high), and $1,520,000 (super) (Minnesota Department of Commerce, 2004). Aggregate excess insurance, also referred to as aggregate reinsurance, is typically purchased by a self-insured contractor to cover a compilation of large, unexpected losses. According to Heffron III et al. (1996), the availability of excess coverage and aggregated excess coverage, is very limited. If this type of coverage is even available, it will likely be highly priced. Self-insured contractors typically face premiums exceeding $200,000 (David, 1998). The costs of a self-insurance program must be clearly understood prior to enrolling. These costs, in addition to any excess or aggregate insurance include state filing and reporting requirements, state premium taxes and assessments, and any financial securities such as a letter of credit (Hefferon III et al., 1996).

Whether or not a contractor chooses self-insurance should be largely dependant of management's risk philosophy, financial capabilities, and the loss exposure their operation presents. In other words, management must have an appetite for risk, have a secure financial status, and have an effective risk control program to prevent and control losses. Along with the choice of becoming self-insured, a contractor must consider the administration of the plan. This usually includes claims management, data processing, and data analysis. Typically, a self-insured will contract with a third party administrator (TPA) who will handle all the self-insured claims for an agreed fee.

Summary

A review of the literature identifies basic characteristics that make each type of risk financing plan unique and potentially more beneficial. For example, guaranteed cost plans offer guaranteed rates which are commonly utilized by smaller contractors who are

unwilling or unable to assume increased financial risk. An incurred loss retro is a loss sensitive plan that can reward a contractor for controlling and minimizing losses in the form of premium returns. Incurred losses require estimated premium dollars to be paid to the insurer before the losses occur. Paid loss retros are also loss sensitive, but permit the contractor to retain more cash and secure the premium potentially owed with a line of credit. Large deductible risk financing plans are prospectively rated to cover an insurer's risk for claims exceeding the deductible. Premiums for large deductibles are usually lower because the contractor pays for all claims up to a certain limit. Single parent captives are for contractors with extremely large premiums and can be utilized to increase cash flow, create a tax savings, and provide the parent with the ownership essentially of their own insurance company. Rented captives offer the same benefits as a single parent captive, except that investment returns are not usually as significant because the owner of the rented captive has to capitalize the captive. Group captives give a shareholder control of their own insurance-based risk financing plan. This plan may allow reinsurance to be purchased at a lower rate due to the increased capital outlay required to financially back the captive. Self-insurance has increased administrative requirements to meet all the requirements for each specific state where insurance is provided in. This plan offers the greatest opportunity for savings but also has the highest risk retention.

Of the different insurance-based risk financing plans available, contractors need to determine which plan best suits their specific company. This determination should take into consideration the contractor's appetite for risk, loss control program effectiveness, necessary administrative responsibilities, their financial strength, and their premium size.

CHAPTER III: METHODOLOGY

The purpose of this study was to analyze the benefits of Company XYZ's involvement in a captive insurance program versus alternative risk financing models. The goals of the study were to:

1. perform an analysis of various insurance-based risk transfer techniques
2. assess the ability of Company XYZ's management structure to support alternative risk financing models administratively
3. perform an analysis of the company's commitment to control losses to be involved in other risk financing models

The methods and procedures used to evaluate the risk financing plans available to Company XYZ are explained under the following headings of a) subject selection and description, b) instrumentation c) data collection procedures, d) data analysis, and e) limitations of the study.

Subject Selection and Description

The subject selected, Company XYZ, is a seasonal heavy-highway contractor who has marginal claim experience. Human subjects-related information did not apply to this study because no personal information was obtained. The study was purely designed to verify whether or not the risk financing plan utilized by company XYZ is the best plan for the value, to finance potential losses.

Instrumentation

A review of literature was conducted to identify key components and benefits of Company XYZ's current risk financing plan in comparison to alternative risk financing plans. From the information obtained regarding the components and benefits of each

specific risk financing plan, a risk financing plan analysis template (Table 2) was developed to insert pertinent data used in determining which risk financing plan best suits the company. The key areas composing the template identify the type of risk financing plan, line of coverage, exposure basis, self-insured retention amount, limits, commission, fees, required security, minimum and maximum premium, payment plans, and administrative requirements. Each specific risk financing plan (commercial, captive, and self insurance) will utilize multiple templates to present the data in a more user friendly fashion. Additionally, the templates may be slightly modified to accommodate the risk financing plan being analyzed.

Table 2

Risk financing plan analysis template

Risk financing plan
Line of coverage
Exposure basis
Self-insured retention (deductible)
Limits
Premium
Commission
Fees
Required security
Total minimum premium
Total maximum premium
Payment plan
Administrative requirements
Other

Data Collection Procedures

Data for the different risk financing plans was collected from a number of sources. Company XYZ's current group captive supporters (i.e. broker and captive managers) provided captive pricing and loss history numbers via personal communications, group captive marketing packages, and the annual proforma (i.e. description of the broken down costs and financial security requirements) provided by the

captive managers. Company XYZ's previous insurance carrier was asked to provide a sample insurance policy which identified costs, coverages, and any available services based on Company XYZ's previous loss experience. In consideration of self-insurance, basic data was retrieved from the State of Minnesota Statutes 79A.01-.18 which identifies the requirements of an employer who desires to become self-insured.

Company XYZ was able to provide a significant historical background on claims paid (actual dollars paid to cover claim expense) and incurred (paid and reserved dollars for claim expense) during the previous five years. This data was utilized in projecting future insurance costs.

Data Analysis

The data analysis began by inserting collected data into the template identified in Appendix A. Upon completion of the template, conclusions were made based on tangible items such as coverage limits offered, services provided, and costs. An analysis of services provided by each specific risk financing plan will also be conducted to verify the current plan utilized by Company XYZ does in fact add the most value. Data will be presented in tables and graphs to visually display results of this study.

Limitations of the Study

This study is limited to a high deductible/retro combination, a group captive, and a self insurance risk financing plan. Additionally, the study is limited to the policy year 2001 for risk financing plan quotes because of data restraints.

CHAPTER IV: RESULTS

The purpose of this study was to analyze the benefits of Company XYZ's involvement in a captive insurance program versus alternative risk financing models. The goals of the study were to:

1. perform an analysis of various insurance-based risk transfer techniques
2. assess the ability of Company XYZ's management structure to support alternative risk financing models administratively
3. perform an analysis of the company's commitment to control loss to be involved in other risk financing models

Analysis of Various Risk Transfer Techniques

The first goal of this study was to perform an analysis of various risk transfer techniques. Through the process of reviewing literature and seeking insurance quotes, a "risk financing plan analysis template" (Table 2) was developed to compare and contrast provided coverages, costs and services. Appendixes A, B, and C are the completed risk financing plan analysis templates for a deductible/retro plan, a group captive plan, and a self-insurance plan, respectively.

Coverages quoted for each specific risk financing plan were workers compensation, auto, general liability, employee dishonesty, forgery, property, umbrella excess liability, inland marine builder's risk, inland marine contractor's equipment, and small computers. All quoted coverages had comparable limits with the exception of worker compensation. The group captive and self-insurance, both offer higher limits than the high deductible/retro program. As a result of the higher limits, Company XYZ assumes a heightened financial risk compared to the high deductible/retro plan.

Costs associated with each risk financing plan varied considerably at first glance in Table 3. Self-insurance appears to be the most economical although it should be noted that the self-insurance plan does not include any administrative or legal costs. Administration alone could add significant costs to a self-insurance plan. The group captive is the most expensive, but a deceiving aspect of the data pertaining to the group captive is that the money allocated for the loss fund ($620,000) is required to be paid up front. These funds could potentially be returned if Company XYZ experiences zero losses. With the $620,000 subtracted from the minimum premium identified in Table 3, the new minimum premium would equal $735,631. Because the loss fund is required to be paid up front, cash flow during the beginning years of the captive is decreased in comparison to the high deductible/retro and self-insurance plans. Although cash flow may be minimized, the loss funds, if managed correctly, should be invested conservatively to permit a more desirable return on investment. As the claims mature (4 years post policy year), a percentage of the unspent fund will be returned to Company XYZ for them to decide what to do with. After the initial four years, cash flow should increase as funds begin to return if losses are minimized and controlled.

Table 3

Risk financing plan cost

Risk financing plan	**Min. Premium**	**Max. Premium**	**Est. Premium**
High deductible/retro	$628,868	$1,132,458	$928,868
Group captive	$1,355,631	$1,820,631	$1,035,631
Self-insurance	$405,161	$1,186,024	$726,024

Services included in a risk financing plan are often considered to be very valuable, despite their resulting in an increased premium. The high deductible/retro plan provides claim management for a fee as part of the policy. This fee, as a result of claims management, is not included in the premium and is charged an unidentified percentage of the final claim. If Company XYZ were to have a year with significant losses, this could result in added expense.

Contrary to the high deductible/retro plan, the group captive offers numerous services as part of the package. Granted, the services are provided for a fee, but can be added value to Company XYZ for utilizing the group captive program. Some of the services provided and their respective percentages of premium include loss control (1%) and claims administration (4.25%). Additionally, a small portion of the consulting fees (4.25% of the premium) is used to conduct risk control workshops that have been known to address industry best practices. They are also utilized to address loss control concerns within the captive and the construction industry with the intent of minimizing loss exposure within the captive members.

Self-insurance on the other hand, offers no services as part of the premium prices identified in Table 3. As a result, if Company XYZ were to pursue self-insurance, they would likely need to hire a claims administrator and additional loss control staff. As with the high deductible/retro program, there is a lot of uncertainty regarding the cost of claim administration. This service can typically be purchased for a negotiated price for each lost-time claim and a lesser negotiated price for each medical only claim. A common industry administration price on a per lost-time claim basis is $3,000 and $1,000 per medical-only claims. Another option is paying a percentage of each claim to fund the

administration of it. Hiring an in-house claim adjuster is another option. Including benefits, this position will likely cost Company XYZ $60,000 to $90,000 depending on knowledge and experience of the claim adjuster hired. Additional loss control staff would likely cost Company XYZ an additional $50,000 to $80,000. Loss control and claims administration alone, will add a significant portion to the cost of being self-insured.

Table 4

Group captive fixed costs

Unbundled Fixed Cost Item	Company XYZ's Group Captive Fixed Costs
Front Fee	9.5%
State Tax	3%
FET (i.e. Federal Excise Tax)	0.9%
Specific Reinsurance Cost	18.2%
Broker Costs	7.13%
Managing Consultant Fees	4.75%
Claims Administration	4.25%
Loss Control Administration	1%
Offshore Management/Audits/Actuarial/Miscellaneous	1%
Total Fixed Costs	49.73%

All the costs associated with the group captive are identified within the fixed costs of the plan. Table 4 above identifies the percentage of Company XYZ's premium the fixed costs account for. Traditional lines of insurance will not provide the insured this

information. This identifies the greatest costs to Company XYZ beyond actual loses and areas where potential savings might be sought.

Company XYZ's management structure to support alternative risk financing plans

The success of a company's ability to assume heightened risk with alternative risk financing plans such as a high deductible/retro, group captive or self-insurance, is often dependant on the management structure and staffing. Enrollment in any of the three plans would require a more significant focus on loss control and loss prevention if it is the company's intent to minimize insurance costs. Any contractor enrolled in either of the three risk financing plans should at a minimum have a full time safety director which Company XYZ currently has. Since a group captive is Company XYZ's current risk financing plan and prior to 2001 was enrolled in a high deductible/retro risk financing plan, experience indicates the company had adequate administration. To help with a more pro-active safety program, Company XYZ could have invested in an additional seasonal safety engineer to assist with job site audits and training. Evidence of this is in Table 5 which indicates a recent increase in incurred losses, revenue, and hours worked. Staffing for safety should also be increased to match the work load assumed by Company XYZ.

Table 5

Company XYZ Annual Loss Analysis A

Policy Year	2000	2001	2002	2003	2004
Year end incurred losses ($)	362,061	159,477	99,742	151,189	252,257
Projected incurred losses ($) [1]	782,880	279,137	399,727	502,881	710,021
Revenue ($)	78,697,691	67,349,318	65,571,109	74,197,230	88,823,231
Hours Worked	630,442	596,179	581,957	671,427	759,727

[1] Projected incurred losses were calculated from a loss development history established by Company XYZ (See Table 6).

Table 6

Incurred loss development history

		Increase over previous year
Average loss payment 1st year	$192,406	-
Average loss payment 2nd year	$292,079	52%
Average loss payment 3rd year	$389,655	33%
Average loss payment 4th year	$454,781	17%
Average loss payment 5th year	$541,645	19%

If Company XYZ was to seek self-insurance, some additional staff would likely be needed. Particularly, a claims administrator would be needed if the company decided to manage claims in-house versus via a third party administrator. If an effective loss control program is implemented and losses are minimized, a third party administrator

would likely be the most economical because they are usually paid on a per claim basis. Hiring an additional safety engineer to assist the current safety director would allow Company XYZ to be more proactive and decrease response time lag due to an excessive work load.

Company XYZ's commitment to loss control

The commitment of Company XYZ to their loss control program can be evaluated a number of ways. This study utilizes the OSHA incident rate, lost time incident rate, and an analysis of the hours worked and the projected incurred claim dollars. The OSHA incident rate formula is: (number of OSHA recordables X 200,000) / (actual man hours worked). The lost time case incident rate is: (number of lost time cases X 200,000) / (actual man hours worked). Table 7 displays data obtained regarding Company XYZ's loss history.

Table 7

Company XYZ Annual Loss Analysis B

Policy year	2000	2001	2002	2003	2004
Gross margin (million $)	16.23	9.91	9.96	8.52	9.85
Incurred losses (million $)	0.36	0.16	0.10	0.15	0.25
Hours worked (million HRS)	0.63	0.60	0.58	0.67	0.76
Projected incurred losses (million $)	0.78	0.28	0.40	0.50	0.71
OSHA incident rate	15.2	15.8	10.0	12.5	11.3
OSHA incident rate industry average	10.8	10.8	10.8	10.8	10.8
Lost time case incident rate	7.3	7.7	3.8	4.8	5.0
Lost time case incident rate industry average	4.2	4.2	4.2	4.2	4.2

From Table 7, Company XYZ's OSHA recordable incident rate was able to be graphed in Figure 7. It appears Company XYZ has been successful in decreasing their OSHA incident rate in comparison to the industry average. With the rate still above the industry average however, the graph indicates there is still room for improvement. Figure 8 displays Company XYZ's lost time case incident rate. Again improvements were made, but the lost time case incident rate is beginning to slowly increase. Additionally, the lost time case incident rate is above the industry average.

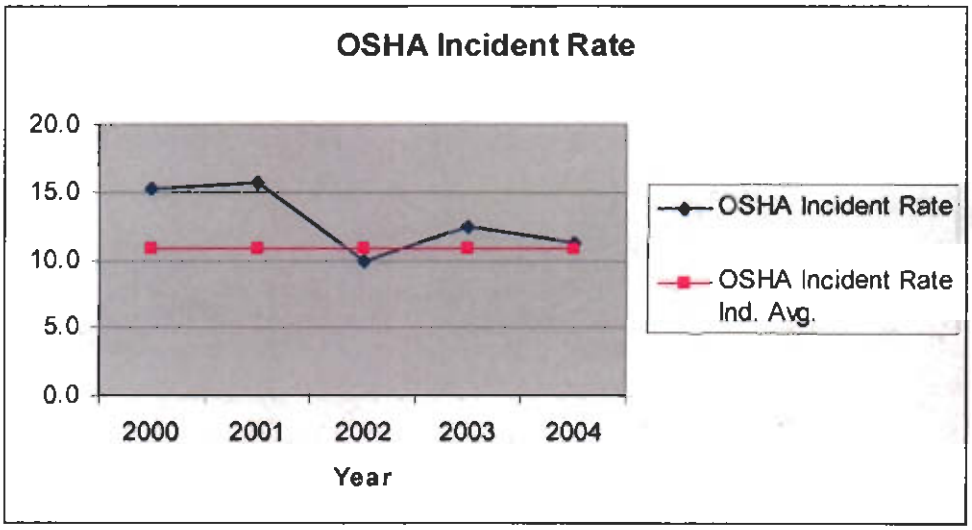

Figure 7

Figure 8

Another way to analyze Company XYZ's commitment to Risk control is by comparing hours with incurred losses and projected incurred losses. Seasonal contractors are often presented with the challenge of completing a years worth of work into eight months due to the cold temperatures in the Midwest. Since Company XYZ is a seasonal contractor, they also see a spike in injuries during the peak of their season (July and August). Figure 9 shows how the hours completed by Company XYZ have been increasing. The incurred losses and projected losses have also been increasing. The projected incurred losses however have been increasing at a faster rate than the number of employee hours.

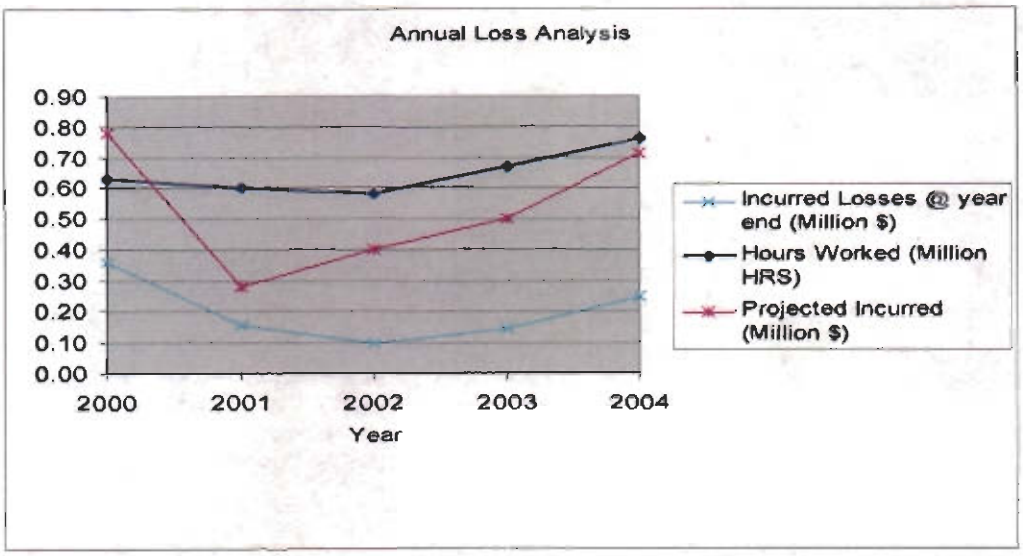

Figure 9

Discussion

After performing a complete analysis of the risk financing plans available and the literature review, some conflicting concepts were discovered. The primary discrepancy was that of increased cash flow with a group captive. It is Company XYZ's experience that cash flow is actually decreased as members of the group captive because the entire loss fund needs to be paid at the beginning of the policy year. However, this experience would change if losses were controlled as funds would be returned during the fifth year from the first year's loss fund. Additionally after comparing Table 1 to Table 4, the fixed costs charged to Company XYZ's group captive are higher than presented in Table 1. The group captive is actually experiencing fixed costs nearing 50%. This complete analysis also found the group captive to be the most expensive in comparison to the alternative risk financing plans. Despite the increased cost however, it should be noted that the service provided likely offset the increased cost, assuming they can be afforded.

A common finding indicated any type of alternative risk financing method needs

to have an increased focus on loss control. Company XYZ has an acceptable loss control program when reviewing lost time injuries and the OSHA recordable rate, but has room-for improvement. All programs discussed (high deductible, group captive, and self-insurance) do however highly recommend an increased focus on loss control.

CHAPTER V: CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to analyze the benefits of Company XYZ's involvement in a captive insurance program versus alternative risk financing models. The goals of the study were to:

1. perform an analysis of various insurance-based risk transfer techniques
2. assess the ability of Company XYZ's management structure to support alternative risk financing models administratively
3. perform an analysis of the company's commitment to control losses to be involved in other risk financing models

A review of studies conducted on risk financing methods identified methods to fund losses and what was needed for the plan to be successful. After a general background was obtained for each risk financing plan, pricing was requested from Company XYZ's current group captive, previous high deductible/retro insurance carrier, and the State of Minnesota for self insurance. Once the data was gathered, it was placed into a table to help compare costs, services, and administrative needs of each risk financing plan. Based on the data obtained some discussion was entertained regarding conflicting information

Conclusions

In conclusion the author found the following points of significance with relation to each goal:

1. The group captive is not the most economical. Company XYZ's previous insurance provider was actually much cheaper and offered a less volatile price.

2. Administration was analyzed and it appears that an increase in administrative staff would help minimize and control losses with all plans. Self insurance however clearly requires the greatest administration.
3. The group captive offers the most services and thus makes this plan the most valuable.

Recommendations

In order to minimize the organizations potential for loss to increase their odds with any of the three risk financing plans analyzed, the following changes are recommended:

1. Company XYZ needs to improve upon their loss control emphasis for their group captive to be more economical. In order for cash flow to be increased losses need to be minimized and controlled.
2. Increase loss control staff to include a minimum summer intern. This would help increase the safety awareness and safety training on Company XYZ jobsites.

Areas of Further Research

One area to further research may be the correlation between hours worked and losses incurred. Based on the author's research, there appears to be some significance to the relationship between high hours of work and high incurred costs.

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Appendix A: High deductible/retro risk financing plan

Risk Financing Plan	Loss Sensitive (Deductible/Retro)		
Line of Coverage	**Workers Compensation (WC)**		
Exposure Basis	$ 9,905,000		WC Payroll (Estimated)
Self-Insured Retention	$ 100,000		Deductible per occurrence
Limits	Statutory		
	$ 500,000		Bodily Injury By Accident, Each Accident
	$ 500,000		Bodily Injury By Disease, Policy Limit
	$ 500,000		Bodily Injury By Disease, Each Employee
	States Covered:		IA, KS, MN, MO, MT, SD, WI
Premium	$ 244,491		(Min. Rate of 2.466/100 Payroll Dollars)
	$ 589,348		(Max. Rate of 5.950/100 Payroll Dollars)
Commission (Broker)	$ 58,216		(23.81% of Audited Minimum Premium)
	$ 140,324		(23.81% of Audited Maximum Premium)
Line of Coverage	**Auto**		
Exposure Basis	Not Stated		
Self-Insured Retention	$ 100,000		Deductible per occurrence
Limits	$ 1,000,000		Combined Single Limit
	Statutory		No fault
	$ 1,000,000		Uninsured/Underinsured motorist
Premium	$ 65,298		Flat Charge
Commission (Broker)	$ 11,973		Flat Charge
Line of Coverage	**General Liability (GL)**		
Exposure Basis	$ 9,905,000		WC Payroll (Estimated)
Self-Insured Retention	$ 100,000		Deductible per occurrence
Limits - Premises & Products	$ 2,000,000		General total limit
	$ 2,000,000		Products and completed work total limit
	$ 1,000,000		Each event limit
	$ 1,000,000		Personal injury and advertising injury each person limit
	$ 1,000,000		Personal injury and advertising injury total limit
	$ 100,000		Premises damage limit
	$ 5,000		Medical expense limit
Limits - Employee Benefits Liability	$ 1,000,000		Each wrongful act
	$ 3,000,000		Total Limit
Premium	$ 117,639		(Min. Rate of 1.188/100 Payroll Dollars)
Commission (Broker)	$ 18,189		(15.46% of Audited Premium)

Line of Coverage	Employee Dishonesty		
Self-Insured Retention	$	100,000	Deductible per occurrence
Limits	$	800,000	

Line of Coverage	Forgery		
Self-Insured Retention	$	100,000	Deductible per occurrence
Limits	$	50,000	

Line of Coverage	Property		
Self-Insured Retention	$	100,000	Deductible per occurrence
Limits	$	1,630,000	Building
	$	525,000	Contents
	$	100,000	Blanket Extra Expense
Premium	$	3,269	Includes Bond and Forgery premiums

Line of Coverage	Umbrella Excess Liability		
Self-Insured Retention	$	100,000	Deductible per occurrence
Limits	$	20,000,000	General total
	$	20,000,000	Products and completed work total
	$	20,000,000	Each event
	$	20,000,000	Personal injury each person
	$	20,000,000	Advertising injury each person
	$	20,000,000	Employee benefits total
	$	20,000,000	Employee benefits each event
Premium	$	79,263	
Commission (Broker)	$	11,889	(15% of Premium)

Line of Coverage	Inland Marine - Builder's Risk		
Self-Insured Retention	$	100,000	Deductible per occurrence
Limits	$	200,000	Project limit
	$	100,000	Temporary location
	$	50,000	Property in transit
	$	200,000	Catastrophe limit
Premium	Included in the Contractor's Equipment premium		

Line of Coverage	Inland Marine - Contractor's Equipment		
Self-Insured Retention	$	100,000	Deductible per event
Limits	$	9,081,568	Unscheduled Equipment
	$	1,000,000	Per item unscheduled equipment limit
	$	1,000,000	Leased/rented equipment per item limit
	$	5,000,000	Catastrophe limit
	$	1,000	Any one day rental expense
	$	20,000	Any one loss rental expense
	$	1,000,000	Equipment on water
Premium	$	3,641	

Line of Coverage	Small Computer		
Self-Insured Retention	$	100,000	Deductible per occurrence
Limits	$	100,000	Hardware limit
	$	55,000	Additional benefits limit
	$	15,000	Blanket - Jobsite trailers
	$	50,000	Newly acquired limit
	$	50,000	New locations
	$	50,000	Transit
	$	50,000	Temporary location

Fees	Included Commission Fees in with specific Lines of Coverage		
	$	40,000	Loss fund (should be refunded if no losses)
	$	15,000	Prior Year Loss Fund
	$	27,625	Loss Conversion Factor if losses occur
	$	9,000	MN Assessment (WC Losses)

Required Security	$	75,000	Letter of Credit

Total Min. Premium	$	628,868
Total Max. Premium	$	1,132,458
Estimated Premium	$	965,493

Payment Plan

Pay minimum premium up front

Provide LOC

Provide $55,000 of which $40,000 will be escrowed to fund potential losses.

Insured will be billed for all paid losses up to $100,000.

Appendix B: Group captive risk financing plan

Risk Financing Plan	Group Captive	
Line of Coverage	**Workers Compensation (WC)**	
Exposure Basis	$ 9,905,000	WC Payroll (Estimated)
Self-Insured Retention	$ 250,000	Per occurrence
Limits	Statutory	
	$ 1,000,000	Employers liability limit
	States covered: based on each companies states of operation at policy inception	
Premium (Loss Pick)	$ 377,952	Minimum:
		Frequency Fund $283,464
		Severity Fund $94,488
	$661,416	Maximum = 2 x Frequency Fund + Severity Fund
Fees/Fixed Costs	$ 230,667	
Other	$ 20,863	MN WC Assessment
Line of Coverage	**Auto**	
Self-Insured Retention (Deductible)	$250 - $2,500	Deductible dependant on vehicle type
Limits	$ 1,000,000	Each person/occurrence
	Statutory	No Fault
	Statutory	Uninsured/Underinsured motorist
	$ 50,000	Hired Automobiles limit
Premium (Loss Pick)	$ 134,292	Minimum:
		Frequency Fund $100,719
		Severity Fund $33,573
	$ 235,011	Maximum = 2 x Frequency Fund + Severity Fund
Fees/Fixed Costs	$ 81,959	

Line of Coverage	General Liability (GL)	
Exposure Basis	$ 9,905,000	Payroll
Self-Insured Retention (Deductible)	$ 250,000	Per occurrence
Limits - Premises & Products	$ 1,000,000	Each occurrence bodily injury & property
	$ 2,000,000	Aggregate damage liability
	$ 2,000,000	Each occurrence/aggregate products & completed operations
	$ 1,000,000	Each occurrence personal injury and advertising liability
	$ 10,000	Each person premises medical
	$ 100,000	Fire legal liability
Limits - Employee Benefits Liability	$ 1,000,000	Each negligent act
	$ 1,000,000	Aggregate
Premium (Loss Pick)	$ 107,756	Minimum
		Frequency Fund $80,817
		Severity Fund $26,939
	$ 188,573	Maximum = 2 x Frequency Fund + Severity Fund
Fees/Fixed Costs	$ 65,764	
Other		
Captive Commission	$ 90,000	Flat Broker Fee
Required Security	$ 306,900	Letter of Credit = 2/3 Frequency Fund

Captive Lines Summary	
Minimum Captive Lines Premium	$ 1,109,253
Maximum Captive Lines Premium	$ 1,574,253

Line of Coverage	Employee Dishonesty (NON-CAPTIVE)	
Self-Insured Retention (Deductible)	$ 1,000	
Limits	$ 800,000	
Premium	$ -	Included in forgery

Line of Coverage	Forgery (NON-CAPTIVE)	
Self-Insured Retention (Deductible)	$ 1,000	
Limits	$ 50,000	
Premium	$ 2,739	Includes dishonesty

Line of Coverage	Property (NON-CAPTIVE)	
Exposure Basis	Replacement Cost	
Self-Insured Retention (Deductible)	$ 100,000	
Limits	$ 1,630,000	Real property blanket limit
	$ 525,000	Personal property blanket limit
	$ 100,000	Extra expense
	$ 50,000	Valuable Papers
		$ 1,000 Deductible
	$ 50,000	Accounts Receivable
		$ 1,000 Deductible
Premium	$ 3,476	

Line of Coverage	Umbrella Excess Liability (NON-CAPTIVE)	
Self-Insured Retention (Deductible)	None	
Limits	$ 10,000,000	Occurrence
	$ 10,000,000	Aggregate
Premium	$ 225,000	

Line of Coverage	Builder's Risk (NON-CAPTIVE)	
Self-Insured Retention (Deductible)	$ 100,000	Deductible
Limits	$ 200,000	Any one location
	$ 200,000	Catastrophe
	$ 50,000	Any temporary location
	$ 50,000	Transit
Premium	$ 500	

Line of Coverage	Contractor's Equipment (NON-CAPTIVE)	
Self-Insured Retention (Deductible)	$ 100,000	Deductible
Limits	$ 9,199,805	Owned/long-term leased
	$ 1,000,000	Unscheduled leased/rented equip.
	$ 1,000,000	Leased/rented from others
	$ 5,000,000	Catastrophe limit
	$ 1,000	Rental reimbursement per day
	$ 20,000	Rental reimbursement aggregate
Premium	$ 14,472	

Line of Coverage	Computers (NON-CAPTIVE)	
Self-Insured Retention (Deductible)	$ 100,000	
Limits	$ 100,000	Hardware
	$ 55,000	Data/media/software/extra expense
Premium	$ 191	

Non-Captive Lines Premium	$ 246,378

Total Minimum Premium	$ 1,355,631
Total Maximum Premium	$ 1,820,631
Company XYZ Estimated Premium	$ 1,035,631

Appendix C: Self-insurance risk financing plan

Risk Financing Plan	Self Insurance	
Line of Coverage	**Workers' Compensation (WC) Self Insurance**	
Exposure Basis	$ 9,905,000	Estimated payroll dollars
Self-Insured Retention	$ 760,000	
Limits	$ 760,000	(Excess insurance can be purchased limits)
Premium	$ -	Fund claims as funds are paid out
Commission	$ -	
Fees	$ 4,000	Application Fee (MN)
Required Security	$ 760,000	Must equal the retention limit (LOC)
Claims Administration	$ 90,000	Option A - In house claims administration
	?	Option B - Third party administrator ($1,000 per Medical Only Claims and $3,000 per Lost Time Claims)
		Note: this is largely dependant on the policy year losses
Legal Services	?	Too much uncertainty
Assessment	$ 20,863	MN WC Assessment
Line of Coverage	**Auto**	
Exposure Basis	Not Stated	
Self-Insured Retention	$ 100,000	Deductible per occurrence
Limits	$ 1,000,000	Combined Single Limit
	Statutory	No fault
	$ 1,000,000	Uninsured/Underinsured motorist
Premium	$ 65,298	Flat Charge
Commission (Broker)	$ 11,973	Flat Charge
Line of Coverage	**General Liability (GL)**	
Exposure Basis	$ 9,905,000	WC Payroll (Estimated)
Self-Insured Retention	$ 100,000	Deductible per occurrence
Limits - Premises & Products		
	$ 2,000,000	General total limit
	$ 2,000,000	Products and completed work total limit
	$ 1,000,000	Each event limit
	$ 1,000,000	Personal injury and advertising injury each person limit
	$ 1,000,000	Personal injury and advertising injury total limit
	$ 100,000	Premises damage limit
	$ 5,000	Medical expense limit
Limits - Employee Benefits Liability		
	$ 1,000,000	Each wrongful act
	$ 3,000,000	Total Limit
Premium	$ 117,639	(Min. Rate of 1.188/100 Payroll Dollars)
Commission (Broker)	$ 18,189	(15.46% of Audited Premium)

Line of Coverage	Employee Dishonesty	
Self-Insured Retention	$ 100,000	Deductible per occurrence
Limits	$ 800,000	

Line of Coverage	Forgery	
Self-Insured Retention	$ 100,000	Deductible per occurrence
Limits	$ 50,000	

Line of Coverage	Property	
Self-Insured Retention	$ 100,000	Deductible per occurrence
Limits	$ 1,630,000	Building
	$ 525,000	Contents
	$ 100,000	Blanket Extra Expense
Premium	$ 3,269	Includes Bond and Forgery premiums

Line of Coverage	Umbrella Excess Liability	
Self-Insured Retention	$ 100,000	Deductible per occurrence
Limits	$ 20,000,000	General total
	$ 20,000,000	Products and completed work total
	$ 20,000,000	Each event
	$ 20,000,000	Personal injury each person
	$ 20,000,000	Advertising injury each person
	$ 20,000,000	Employee benefits total
	$ 20,000,000	Employee benefits each event
Premium	$ 79,263	
Commission (Broker)	$ 11,889	(15% of Premium)

Line of Coverage	Inland Marine - Builder's Risk	
Self-Insured Retention	$ 100,000	Deductible per occurrence
Limits	$ 200,000	Project limit
	$ 100,000	Temporary location
	$ 50,000	Property in transit
	$ 200,000	Catastrophe limit
Premium	Included in the Contractor's Equipment premium	

Line of Coverage	Inland Marine - Contractor's Equipment	
Self-Insured Retention	$ 100,000	Deductible per event
Limits	$ 9,081,568	Unscheduled Equipment
	$ 1,000,000	Per item unscheduled equipment limit
	$ 1,000,000	Leased/rented equipment per item limit
	$ 5,000,000	Catastrophe limit
	$ 1,000	Any one day rental expense
	$ 20,000	Any one loss rental expense
	$ 1,000,000	Equipment on water
Premium	$ 3,641	

Line of Coverage	Small Computer	
Self-Insured Retention	$ 100,000	Deductible per occurrence
Limits	$ 100,000	Hardware limit
	$ 55,000	Additional benefits limit
	$ 15,000	Blanket - Jobsite trailers
	$ 50,000	Newly acquired limit
	$ 50,000	New locations
	$ 50,000	Transit
	$ 50,000	Temporary location
Required Security	$ 75,000	Letter of Credit
Total Minimum Premium	$ 405,161	
Total Maximum Premium	$ 1,186,024	
XYZ Estimated Premium	$ 726,024	(Company XYZ estimates $300,000 in losses)